

Claims

1. An apparatus for cleaning of a gas, comprising
  - 5 - a housing (1), which delimits a separation chamber (4) having a gas inlet (2) for gas to be cleaned and a gas outlet (3) for cleaned gas,
  - 10 - a centrifugal rotor (5), which is arranged to rotate about a substantially vertical rotational axis (R) in the separation chamber (4) and to entrain in its rotation gas to be cleaned,
  - 15 -a drive shaft (6) for rotation of the centrifugal rotor (5), which drive shaft (6) extends downwardly from the centrifugal rotor (5) through a bottom (11, 12) in the separation chamber (4) and into a drive chamber (19) situated below the bottom (11, 12), and
  - 20 -a driving device (18) for rotation of the drive shaft (6) and thereby the centrifugal rotor (5) , which driving device is arranged to generate one or more jets of a liquid in the drive chamber (19) for accomplishing said rotation of the drive shaft (6),

## c h a r a c t e r i z e d i n

- that said bottom (11, 12) delimits a drainage chamber (23) in an area, in  
25 which the drive shaft (6) extends through the bottom (11, 12), the drainage chamber (23) being situated so that it will receive liquid that unintentionally flows upwardly from the drive chamber (19) along the drive shaft (6), and

- that the drainage chamber (23) has a liquid outlet (31) for draining of liquid.

2. An apparatus according to claim 1, in which said bottom comprises an upper wall (12) and a lower wall (11), the drainage chamber (23) being delimited between the upper wall (12) and the lower wall (11).

5 3. An apparatus according to claim 1 or 2, in which the liquid outlet (31) from the drainage chamber (23) opens into a space other than the drive chamber (19).

10 4. An apparatus according to claim 3, in which the liquid outlet (31) from the drainage chamber (23) opens into an outlet channel (22) from the drive chamber (23).

15 5. An apparatus according to claim 2, in which a bearing (10) is arranged between the drive shaft (6) and said lower wall (11).

20 6. An apparatus according to any one of the preceding claims, in which a lower part of the separation chamber (4) communicates with the drainage chamber (23) through a throttled passage (25), through which liquid separated from said gas is allowed to run from the separation chamber (4) into the drainage chamber (23).

25 7. An apparatus according to any one of the preceding claims, in which said gas outlet (3) from the separation chamber (4) communicates with the interior of a gas outlet conduit, which extends upwardly from the gas outlet (3), the drainage chamber (23) having a throttled liquid inlet (27) so situated that liquid drops running downwardly in said gas outlet conduit

30 will reach the throttled liquid inlet (27).

8. An apparatus according to any one of the preceding claims, in which said driving device (18) comprises a turbine member (20), which is supported by the drive shaft (6) in the drive chamber (19), and a spray member (21) that is arranged to spray liquid against the turbine member (20) in the drive chamber (19) for rotation of the drive shaft (6) and thereby the centrifugal rotor (5).  
5